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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
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EXAMINER

WANG, EUGENIA

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1795

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12/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/689,876	Applicant(s) KNIGHTS ET AL.	
	Examiner Eugenia Wang	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the amendment received October 4, 2007:
 - a. Claims 1-15 are pending with claims 1-9 being withdrawn as drawn to an unelected species.
 - b. The core of the rejection is maintained, with any changes made either (a) necessitated by amendment or (b) based on stylistic preferences of the new Examiner.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 4, 2007 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by US 4,131,721 (Fung et al.).

As to claim 10, Fung et al. teach a fuel cell comprising an anode, a cathode, and an electrolyte (col. 1, lines 65-68; col. 2, lines 1-5). Furthermore, Fung et al. teach that the electrodes include electrocatalyst, wherein one embodiment includes graphitized carbon (graphite) (col. 4, lines 16-30). In the broadest interpretation, it can still be said that the graphitized carbon mixed into the electro-catalyst provides some support to the electrocatalyst, and thus the catalyst is supported on the graphitic carbon. Although Fung et al. do not specifically disclose the relative oxidative corrosion of graphitized carbon, graphitized carbon is inherently more resistant to oxidative corrosion than carbon black. This position is taken since both Fung et al. and the instant application utilize the same anode support.

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)

In the case of the instant application the basis for expectation of inherency is that Fung et al. and the instant application utilize the same anode support.

The Examiner requires applicant to provide that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product.

Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

4. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Fung et al., as applied to claim 10, as evidenced by US 5096560 (Takai et al.).

As to claims 11 and 12, Fung et al. do not specifically disclose the d_{002} spacing (3.56 angstroms or less, as required by claim 11 and 3.45 angstroms or less, as required by claim 12). However, the d_{002} spacing is an inherent property of graphitic carbon. Takai et al. is used as an evidentiary piece to show this property. Takai et al. states that graphitic carbon has an average interlaminar spacing (d_{002}) of 3.35 to 3.42 angstroms (col. 5, lines 20-24).

As to claim 13, Fung et al. do not specifically disclose the BET surface area of graphitic carbon (less than 230 m^2/g as required by claim 13). However, the BET surface area of graphitic carbon is inherent. Takai is used as an evidentiary piece to

show this property. Takai et al. states that graphitic carbon has a specific surface area of 50 m²/g or more (col. 5, lines 15-20).

5. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by US 5,277,996 (Marchetti et al.).

As to claim 10, Marchetti et al. teach a fuel cell comprising an anode, a cathode, and an electrolyte (col. 3, lines 2-6). Moreover, Marchetti et al. teach a graphitized carbon substrate layer with an anchor layer and a platinum catalyst layer on top of it (col. 3, lines 7-20). Since the catalyst is on top of the graphitized, it indirectly provides support for the catalyst layer, and thus the catalyst is supported on the graphitic carbon. Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22, 13 USPQ2d, 1320, 1322 (Fed. Cir. 1989).

Although Marchetti et al. do not specifically disclose the relative oxidative corrosion of graphitized carbon, graphitized carbon is inherently more resistant to oxidative corrosion than carbon black. This position is taken since both Marchetti et al. and the instant application utilize the same anode support.

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)

In the case of the instant application the basis for expectation of inherency is that Marchetti et al. and the instant application utilize the same anode support.

The Examiner requires applicant to provide that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product.

Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

6. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Marchetti et al., as applied to claim 10, as evidenced by US 5096560 (Takai et al.).

As to claims 11 and 12, Marchetti et al. do not specifically disclose the d_{002} spacing (3.56 angstroms or less, as required by claim 11 and 3.45 angstroms or less, as required by claim 12). However, the d_{002} spacing is an inherent property of graphitic

carbon. Takai et al. is used as an evidentiary piece to show this property. Takai et al. states that graphitic carbon has an average interlaminar spacing (d_{002}) of 3.35 to 3.42 angstroms (col. 5, lines 20-24).

As to claim 13, Marchetti et al. do not specifically disclose the BET surface area of graphitic carbon (less than $230 \text{ m}^2/\text{g}$ as required by claim 13). However, the BET surface area of graphitic carbon is inherent. Takai is used as an evidentiary piece to show this property. Takai et al. states that graphitic carbon has a specific surface area of $50 \text{ m}^2/\text{g}$ or more (col. 5, lines 15-20).

Response to Arguments

7. Applicant's arguments filed October 4, 2007 have been fully considered but they are not persuasive.

With respect to Fung et al.:

Applicant argues that Fung et al. does not disclose the use of graphitic carbon as the catalyst support, rather that it only teaches carbon particle support, wherein the only mention of graphitic is within a mixture with the electrocatalyst.

Examiner respectfully disagrees with Applicant's position. Even though the graphitic particles are only mixed with the electrocatalyst, it does not discount the fact that the graphitic particles in the mixture provide support to the electrocatalyst. Further, Applicant has given no evidence to show how graphitic carbon particles (graphitized carbon) does not provide support for the electrocatalyst that it is in contact with.

Applicant argues that their amendment to claim 10 more clearly defines the nature of the support that the graphitic carbon provides.

Examiner respectfully disagrees. The electrocatalyst of Fung et al. can still be reasonably said to have catalyst supported on the graphitic carbon particles within the mixture. Applicant has provided no proof to the contrary. Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22, 13 USPQ2d, 1320, 1322 (Fed. Cir. 1989).

With respect to Marchetti et al.:

Applicant argues that Marchetti et al.'s catalyst is supported on the anchor layer (C₆₀ fullerene), which sits on top of the graphitized carbon substrate layer, and thus does not teach of the "supported catalyst ... supported on graphitic carbon."

Examiner respectfully disagrees. The anode can be construed to be the graphic carbon substrate, the anchor layer, and the catalyst layer. Accordingly, the catalyst can be said to be indirectly supported by the carbon substrate, as the claim language does not positively define the manner of the support. Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22, 13 USPQ2d, 1320, 1322 (Fed. Cir. 1989).

Applicant argues that the phrase "supported on" requires that the catalyst be both supported (attached to) and on (in contact with) the graphitic carbon.

Examiner respectfully disagrees. A common definition for support is "(1) to bear the weight of, especially from below; (2) to hold in position so as to keep from falling, sinking, or slipping" ("supported." *The American Heritage® Dictionary of the English Language, Fourth Edition*. Houghton Mifflin Company, 2004. 28 Nov. 2007. <Dictionary.com <http://dictionary.reference.com/browse/supported>>.). The substrate layer of Marchetti et al. does bear the weight of the catalyst and keeps it in its place. Furthermore, the word on can be defined by "(a) **used to indicated position above and supported by** or in contact with" (emphasis added) ("on." *The American Heritage® Dictionary of the English Language, Fourth Edition*. Houghton Mifflin Company, 2004. 28 Nov. 2007. <Dictionary.com <http://dictionary.reference.com/browse/on>>). As seen, "on" in its broadest sense is used to indicate a position above, wherein that position does not necessarily have to be directly. Furthermore, "on" also has a "supported by" connotation, wherein, the definition of "supported" and how Marchetti et al.'s graphitic substrate applies to it has already been explained. Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22, 13 USPQ2d, 1320, 1322 (Fed. Cir. 1989).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 4810594 (Bregoli et al.) in view of Fung et al.

As to claim 10, Bregoli et al. teach that a fuel cell comprises an anode, a cathode, and an electrolyte (col. 1, lines 15-17). Bregoli et al. teaches that graphitized carbon is used as the cathode catalyst support (col. 3, lines 65-68; col. 4, lines 1-7). It is noted that Bregoli et al. recognizes that graphitized carbon has better resistance

corrosion than carbon black (col. 3, lines 65-68; col. 4, lines 1-7). (This better corrosion resistance would inherently encompass all corrosion including the oxidative corrosion as claimed by the instant application.) Furthermore, if it is argued that Bregoli et al. do not specifically disclose the relative oxidative corrosion of graphitized carbon, graphitized carbon is inherently more resistant to oxidative corrosion than carbon black. This position is taken since both Bregoli et al. and the instant application utilize the same anode support.

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)

In the case of the instant application the basis for expectation of inherency is that Bregoli et al. and the instant application utilize the same anode support.

The Examiner requires applicant to provide that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product.

Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. In *re* Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re* Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

Bregoli et al. do not teach the use of the graphitized carbon as the anode support. However, Fung et al. teach that graphitized carbon is well suited for long-term use as a cathode but can also be used as the anode electrode (col. 4, lines 16-31). The motivation for using graphitized carbon as the anode material is in order to provide the same long-term use. Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to use graphitized carbon as the anode material in order to provide the same long-term use. Furthermore, one of ordinary skill in the art would have been able to ascertain using graphitized carbon as the anode support with the predictable result of it acting in the same manner (as Fung et al. teach that graphitized carbon can be used in both the anode and cathode). It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re* Leshin, 125 USPQ 416.

9. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bregoli et al. in view of Fung et al., as applied to claim 10, as evidenced by Takai et al.

As to claims 11 and 12, Bregoli et al. do not specifically disclose the d_{002} spacing (3.56 angstroms or less, as required by claim 11 and 3.45 angstroms or less, as required by claim 12). However, the d_{002} spacing is an inherent property of graphitic carbon. Takai et al. is used as an evidentiary piece to show this property. Takai et al. states that graphitic carbon has an average interlaminar spacing (d_{002}) of 3.35 to 3.42 angstroms (col. 5, lines 20-24).

As to claim 13, Bregoli et al. do not specifically disclose the BET surface area of graphitic carbon (less than $230 \text{ m}^2/\text{g}$ as required by claim 13). However, the BET surface area of graphitic carbon is inherent. Takai is used as an evidentiary piece to show this property. Takai et al. states that graphitic carbon has a specific surface area of $50 \text{ m}^2/\text{g}$ or more (col. 5, lines 15-20).

10. Claim 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Fung et al., Marchetti et al., or Bregoli et al. in view of Fung et al., as each individually applied to claim 10, in further view of Takai et al.

None of Fung et al., Marchetti et al., or Bregoli et al. in view of Fung et al. teach the specific BET surface area of graphitic carbon ($86 \text{ m}^2/\text{g}$, as claimed).

However, Takai et al. has already been used as an evidentiary piece to show that graphitic carbon has a BET surface area of preferably $50 \text{ m}^2/\text{g}$ or more. Generally, differences in ranges will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such ranges is critical. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969).

Additionally, Takai et al. teach that heat treatment carried out at a temperature of 800 to 3000°C in a non-oxidizing atmosphere for 5 to 20 hours is used to form graphitic carbon and its sharp pore size distribution (col. 5, lines 1-12). Therefore, the heat treatment affects the pores and thus the porosity (including the surface area of the porosity). Thus the surface area of the pores is a result effective variable, which can be optimized for different purposes (i.e. more porous for better ion conductivity, or less porous for better mechanical strength). It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the surface size of the pores, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It has been held that discovering that general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Generally, differences in ranges will not support the patentability of subject matter encompassed by the prior art *unless* there is evidence indicating such ranges is critical. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969).

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fung et al., Marchetti et al., or Bregoli et al. in view of Fung et al., as each individually applied to claim 10, in further view of US 5681435 (Joshi et al.).

None of Fung et al., Marchetti et al., or Bregoli et al. in view of Fung et al. teach the addition of Ti_4O_7 into the carbon support.

Joshi et al. teach the inclusion of Ebonex (a conductive Ti_4O_7 material) in the anode structure of a precious metal oxide and graphite support (col. 4, 51-67; col. 5, lines 1-11). The motivation for wanting to include Ti_4O_7 in the anode is to prevent decay in the performance of the anode (col. 5, lines 1-11). Therefore it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to add Ti_4O_7 into the anode material, as taught by Joshi et al., in order to prevent performance decay.

Response to Arguments

12. Applicant's arguments filed October 4, 2007 have been fully considered but they are not persuasive.

Examiner would like to note that Applicant only argues against the pieces Fung et al. and Marchetti et al. alone. Applicant does not argue how any of the combinations are not proper. (It is specifically noted that Applicant does not argue how the combination of Bregoli et al. and Fung et al. is not obvious, where Bregoli is used as the primary reference.) Therefore, the Examiner maintains the obviousness rejections and upholds the rejection of the primary reference, as above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugenia Wang whose telephone number is 571-272-4942. The examiner can normally be reached on 7 - 4:30 Mon. - Thurs., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EW

A handwritten signature in black ink, appearing to read "Gregg Cantelmo". The signature is fluid and cursive, with the first name "Gregg" and last name "Cantelmo" clearly distinguishable.

GREGG CANTELMO
PRIMARY EXAMINER

A small, dark, handwritten mark or scribble, possibly a signature or initials, located at the bottom left of the page.